Case 3586

Glossina Wiedemann, 1830 (Insecta, Diptera, GLOSSINIDAE): proposed precedence over Nemorhina Robineau-Desvoidy, 1830

Neal L. Evenhuis

J. Linsley Gressitt Center for Entomological Research, Bishop Museum, 1525 Bernice Street, Honolulu, Hawaii 96817–2704, U.S.A. (e-mail: NealE@bishopmuseum.org)

Thomas Pape

Natural History Museum of Denmark, Universitetsparken 15, 2100 Copenhagen, Denmark (e-mail: TPape@snm.ku.dk)

Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the generic name *Glossina* Wiedemann, 1830 (Diptera, GLOSSINIDAE), which is a widely used name for a well-established and medically important genus of tsetse flies. It is threatened by its infrequently used senior subjective synonym, *Nemorhina* Robineau-Desvoidy, 1830. It is proposed that *Glossina* Wiedemann, 1830 be conserved by reversing the precedence relative to *Nemorhina* Robineau-Desvoidy, 1830 under the plenary power of the Commission, in the interest of nomenclatural stability.

Keywords. Nomenclature; taxonomy; Diptera; Glossina; Glossina; Nemorhina; Glossina longipalpis; Nemorhina palpalis; tsetse; Afrotropical.

- 1. Robineau-Desvoidy (1830, p. 389) proposed the generic name *Nemorhina* with one originally included species, *Nemorhina palpalis* Robineau-Desvoidy, 1830 (p. 390), which is the type by monotypy.
- 2. Wiedemann (1830, p. 253) proposed the generic name *Glossina* with one originally included species, *Glossina longipalpis* Wiedemann, 1830 (p. 254), which is the type by monotypy.
- 3. Glossina Wiedemann, 1830 is a well-established genus of tsetse flies and one of the more medically important Diptera, with an extensive medical and taxonomic literature. As intermediate hosts of particularly Trypansoma brucei Plimmer & Bradford, 1899, tsetse flies are vectors of sleeping sickness in humans and nagana in cattle (for a bibliography of over 1500 references to Glossina, see Mulligan & Potts, 1970). Glossina includes over 30 taxonomically valid species-group names (e.g. Pont, 1980; Bisby et al., 2011), with extant species restricted in distribution to the Afrotropical Region [fossil species are known from North America and Europe, cf. Evenhuis (1994), Wedmann (2000)], and it is the type genus of the well-established family GLOSSINIDAE Theobald, 1903 (p. ii) (e.g. Sabrosky, 1999).
- 4. Nemorhina Robineau-Desvoidy, 1830 is a genus-group name comprising nine taxonomically valid species-group names and is known only from the Afrotropical Region (e.g. Pont, 1980). It has occasionally been used as a valid subgenus of *Glossina*

- (e.g. Pont, 1980; Sutton & Carlson, 1997) or its included species have been referred to as the *Glossina palpalis* group, and it is thus treated as a junior synonym of *Glossina* (e.g. Mohamed-Ahmed & Mihok, 1999).
- 5. Smith et al. (1980) recognized the potential dating conflict of the works by Robineau-Desvoidy (1830) and Wiedemann (1830), which has a direct bearing on the priority of these two genus-group names. An annotation under the reference for Wiedemann's 1830 work in that bibliography states (Smith et al., 1980, p. 1184): 'This part is considered to have been published prior to Robineau-Desvoidy, 1830. See Aubertin, 1933.' Aubertin (1933, p. 141, footnote) attempted to resolve the problem of the dating of these two works by stating 'According to Mr. C.D. Sherborn there is no contemporary evidence of the month in which either of these works appeared, but the former [Wiedemann (1830)] was reviewed in 'Isis' in June 1831, while the latter [Robineau-Desvoidy (1830)] was not reviewed in the same periodical until the following November. In the absence of conclusive evidence, it would appear reasonable to assume that the order in which the works were noticed in 'Isis' indicates the order in which they were published. Wiedemann's names are therefore given priority in this paper.' This order of priority of the two works was followed by Evenhuis et al. (1989, p. 947) where they cited Aubertin's (1933) article as justification. However, subsequent research revealed that Robineau-Desvoidy (1830) was actually published on 26 June 1830 (date recorded in the Bibliographie de la France) and that Wiedemann (1830) was published on 1 September 1830 (date of an advertisement by the publisher stating it was just published) (Evenhuis, 1997, pp. 821-822). This change in the relative priority of these two works affects common usage and stability of nomenclature for a number of names proposed in these two works that are currently treated in synonymy. The genus-group names Nemorhina Robineau-Desvoidy, 1830 and Glossina Wiedemann, 1830 are two such names affected.
- 6. Following the Principle of Priority, Nemorhina Robineau-Desvoidy, 1830 [26 June]) becomes the senior synonym of Glossina Wiedemann, 1830 [1 September]). Acceptance of this priority would threaten the long-established usage of Glossina Wiedemann by placing it as a junior subjective synonym of Nemorhina Robineau-Desvoidy when the two are considered synonymous. The genus currently known as Glossina would become Nemorhina (with Glossina either in junior subjective synonymy or as the valid name for a subgenus of Nemorhina, depending on taxonomic views of the generic classification). Evenhuis et al. (2010, p. 117) noted the conflict of these two genera and stated that an application to reverse priority of these two genera was in preparation. This is the application alluded to.
- 7. The International Commission on Zoological Nomenclature is accordingly asked:
 - (1) to use its plenary power to give the name *Glossina* Wiedemann, 1830 [1 September] precedence over *Nemorhina* Robineau-Desvoidy, 1830 [26 June], whenever the two are considered to be synonyms of each other;
 - (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) Glossina Wiedemann, 1830 [1 September] (gender: feminine), type species by monotypy Glossina longipalpis Wiedemann, 1830, with the endorsement that it is to be given precedence over Nemorhina Robineau-Desvoidy, 1830 [26 June], whenever the two are considered to be synonyms of each other;

- (b) Nemorhina Robineau-Desvoidy, 1830 [26 June] (gender: feminine), type species by monotypy Nemorhina palpalis Robineau-Desvoidy, 1830, with the endorsement that it is not to be given priority over Glossina Wiedemann, 1830 [1 September], whenever the two are considered to be synonyms of each other;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) longipalpis Wiedemann, 1830, as published in the binomen Glossina longipalpis (specific name of the type species of Glossina Wiedemann, 1830 [1 September]);
 - (b) palpalis Robineau-Desvoidy, 1830, as published in the binomen Nemorhina palpalis (specific name of the type species of Nemorhina Robineau-Desvoidy, 1830 [26 June]);
- (4) to place on the Official List of Family-Group Names in Zoology the name GLOSSINIDAE Theobald, 1903 (type genus *Glossina* Wiedemann, 1830);

References

- Aubertin, D. 1933. Notes on certain species of the genus Orthellia, with a description of one new species. Annals and Magazine of Natural History, (10)11: 139–144.
- Bisby, F.A., Roskov, Y.R., Orrell, T.M., Nicolson, D., Paglinawan, L.E., Bailly, N., Kirk, P.M., Bourgoin, T., Baillargeon, G. & Ouvrard, D. (Eds.), 2011. Species 2000 & ITIS Catalogue of Life: 2011 Annual Checklist. DVD; Species 2000: Reading, U.K.
- Evenhuis, N.L. 1994. Catalogue of the fossil flies of the world (Insecta: Diptera). 600 pp. Backhuys Publishers, Leiden.
- Evenhuis, N.L., Thompson, F.C., Pont, A.C. & Pyle, B.L. 1989. Literature cited. Pp. 809–991 in Evenhuis, N.L. (Ed.), Catalog of the Diptera of the Australasian and Oceanian regions. 1155 pp. Bishop Museum Press, Honolulu & E.J. Brill, Leiden.
- Evenhuis, N.L., O'Hara, J.E., Pape, T. & Pont, A.C. 2010. Nomenclatural studies toward a world catalog of Diptera genus-group names. Part I. André-Jean-Baptiste Robineau-Desvoidy. *Zootaxa*, 2373, 1–265.
- Evenhuis, N.L. 1997. Litteratura Taxonomica Dipterorum (1758–1930) being a selected list of the books and prints of Diptera taxonomy from the beginning of Linnaean nomenclature to the end of the year 1930; containing information on the biographies, bibliographies, types, collections, and patronymic genera of the authors listed in this work; including detailed information on publication dates, original and subsequent editions, and other ancillary data concerning the publications listed herein, 2 vols. x, 871 pp. Backhuys Publishers, Leiden.
- Mohamed-Ahmed, M.M. & Mihok, S. 1999. Responses of *Glossina fuscipes fuscipes* (Diptera: Glossinidae) and other Diptera to carbon dioxide in linear and dense forests. *Bulletin of Entomological Research*, 89: 177–184.
- Mulligan, H.W. & Potts, W.H. 1970. The African trypanosomiases. lxxxviii, 950 pp. Wiley, New York.
- Pont, A.C. 1980. Family Glossinidae. Pp. 762–765 in Crosskey, R.W. (Ed.), Catalogue of the Diptera of the Afrotropical Region. 1420 pp. British Museum (Natural History), London.
- Robineau-Desvoidy, J.-B. 1830. Essai sur les myodaires. Mémoires présentés par divers savants à l'Académie Royale des Sciences de l'Institut de France (Sciences Mathématiques et Physiques), (2) 2: 1–813.
- Sabrosky, C.W. 1999. Family group names in Diptera. An annotated catalog. Myia, 10: 1–360.
- Smith, K.G.V., Crosskey, R.W. & Pont, A.C. 1980. Bibliography. Pp. 889–1196 in Crosskey, R.W. (Ed.), Catalogue of the Diptera of the Afrotropical Region. 1420 pp. British Museum (Natural History), London.
- Sutton, B.D. & Carlson, D.A. 1997. Cuticular hydrocarbons of *Glossina*, III: Subgenera *Glossina* and *Nemorhina*. *Journal of Chemical Ecology*, 23: 1291–1320.

Theobald, F.V. 1903. Report on collections of mosquitoes or Culicidae, etc., from Gambia, and descriptions of new species. *Memoirs of the Liverpool School of Tropical Medicine*, **10**(Appendix): i–xi.

Wedmann, S. 2000. Die Insekten der oberoligozänen Fossillagerstätte Enspel (Westerwald, Deutschland): Systematik, Biostratinomie und Paläoökologie. *Mainzer Naturwissen*-

schaftliches Archiv, 23: 1–154.

Wiedemann, C.R.W. 1830. Aussereuropäische zweiflügelige Insekten. Als Fortsetzung des Meigenschen Werkes. Erster Theil. xii, 684 pp. Schulz, Hamm.

Acknowledgement of receipt of this application was published in BZN 69: 83.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).